"On the Formation of Definite Figures by the Deposition of Dust." By J. AITKEN, F.R.S. Received July 13, 1903.

(Abstract.)

The author discusses the experiments in Dr. W. J. Russell's paper,* finding from optical examination of the phenomena that the dust falls out from the layer of air creeping along the lower side of the plate, and this dust-free layer of air turns round the edges of the plate and flows over and in contact with its upper surface, so protecting it from any deposit of dust where the current has sufficient horizontal motion; but deposition takes place where the motion is checked by the currents meeting, or where obstructions cause eddies and break the stream-lines, or by anything that tends to prevent the dustless layer of air flowing over the upper surface of the plate.

"Mean Results of Monthly Determinations of the Magnetic Elements at the Valencia Observatory, Cahirciveen., lat. 51° 56′ N., long. 10° 15′ W." By J. E. CULLUM. Received June 5, 1903.

Absolute Declination, 1902.

Date.	G.M.T.	Declination.	Inclination. Mean of two needles.
January	10. 10 A.M.	21° 26′·3 W.	68° 25′·1
February	10. 2	26 ·2	24 ·1
March	10. 4	25 ·7	24 ·9
April	9. 55	23 ·8	25 ·2
May	10. 7	23 ·1	24 ·8
June	9. 57	25 ·5	24 ·4
July	10. 5	25 ·3	23 ·6
August	9. 52	21 ·5	23 ·4
September	9. 53	24 ·8	23 ·1
October	10. 0	21 ·7	22 ·9
November	10. 2	22 ·9	23 ·1
December	10 ·9	23 ·7	22 ·2
Means	10 ·1 A.M.	21° 24′·2	68° 23′·9

* 'Roy. Soc. Proc.,' vol. 71, p. 285.